

32551 S/143/61/000/011/008/009 D203/D302

Determining the optimum ...

$$\frac{\partial t}{\partial \xi}\bigg|_{\xi=0} = 0 \tag{3}$$

$$-\frac{\partial t}{\partial \xi} + \frac{\alpha}{\lambda} \left[\left(t_0 + b t \right) - t \right] = 0 \text{ (on the surface)}$$
 (4)

where ξ = flow coordinate; t_0 = initial temperature of the body; \mathcal{C} = time; Λ = heat conductivity; \mathcal{C} = heat transfer coefficient; a = thermal conductivity; b = speed of heating the medium. Equations for thermal stresses are combined with those describing the tions for thermal stresses are combined with those describing the temperature change in the body. The maximum stresses at points temperature change in the body. The maximum stresses at points the performance of the mean and the surface temperatures on the difference between the mean and the surface temperatures of the body. The coordinates of the mean temperature are found Card 2/ ξ

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Determining the optimum ...

 $(\bar{x}\cong.5777~R$ for the plate) and the final expressions for the maximum stresses are:

$$\sigma = -\frac{1BE}{3(1-v)} \cdot \frac{bR^2}{a} \left[1 - \mathbf{q}\right] \tag{25}$$

for a plate;

$$\sigma = -\frac{1BE}{8(1-v)} \cdot \frac{bR^2}{a} \left[1 - \varphi\right]$$
 (26)

for a cylinder;

$$\sigma = -\frac{1 \cdot BE}{15 \cdot (1 - v)} \cdot \frac{bR^2}{a} \left[1 - \varphi\right]$$
 (27)

for a sphere; φ depends on Biot and Fourier numbers (Bi = $\frac{\alpha}{N}$ R; $F_0 = \frac{\alpha}{R^2} \cdot \mathcal{T}$), β is the coefficient of thermal expansion, E the modu-Card 3/8 5

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Determining the optimum ...

lus of elasticity and v the poisson ratio. The maximum thermal stresses in a plate are given in Fig. 1. When ϕ becomes zero at two points of the body (§ = x̄ and § = R), the stresses reach their maximum possible values. The rate of heating at those points is then constant and equal to the rate of heating of the medium. When these conditions are not reached the maximum stress or the permissible speed of heating are found if ϕ is known. The author states that his calculations have shown that the series for ϕ converge very rapidly and the approximate solution for all three shapes and for $F_{\rm C}\!\geqslant\!0.22$ is

$$\varphi = \exp(-\mu^2, Fo) \tag{32}$$

where μ is the first root of a corresponding characteristic equation. The author gives a graph $\varphi=f(F)$ for Bi = ∞ . If Bi < ∞ , the graph can still be used; in this case the independent variable is determined from

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Determining the optimum ...

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$$Fo_{\infty} = Fo \frac{\sqrt{u^2}}{u^2 + 1}$$

(33)

A graph of the ratio u/u,∞ is also given. This article was recommended by the Kafedra obshchey teplotekhniki (Department of General Thermal Engineering). There are 5 figures and 3 Soviet-bloc references.

ASSOCIATION:

Khar'kovskiy politekhnicheskiy institut imeni V. I. Lenina (Khar'kov Politechnical Institute imeni V.I.

Lenin)

SUBMITTED:

August 2, 1960

Card 5/6/5

21778 5/170/61/004/004/009/014 B113/B214

26.2181

TITLE:

Shevelev, A. A.

AUTHOR:

Temperature stresses and the optimum conditions for heating

Inzhenerno-fizicheskiy zhurnal, v. 4, no. 4, 1961, 75-79

TEXT: Under the usual conditions of heating from the outside and taking PERIODICAL: account of the maximum temperature stresses, regular bodies, an infinite plate, a cylinder, and a sphere are considered in this paper. In the theory of elasticity the temperature stress is given by o = k t, where at is the temperature difference and k a coefficient depending on the physical properties of the body and the manner in which it is fixed. The expressions for the maximum temperature stresses are obtained by integration of general expressions for the temperature stresses of bodies of regular form. Here, the equation

(2) $t = \theta_0 \sum_{n} A_n U_n \exp(-\mu_n F_0),$

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Temperature stresses and ...

must be taken into account, which gives the temperature changes in the body under the corresponding conditions. Here, 90 is the initial elevation of temperature of the body over the temperature of the medium to be cooled, Λ_n is the thermal amplitude depending on the initial conditions, and U_n is the eigenfunction of the problem: for the plate $U_n = \cos \mu_n \frac{x}{R}$, for the cylinder $U_n = J_0(\mu_n \frac{r}{R})$, and for the sphere $U_n = \frac{R}{r} \frac{\sin \mu_n \frac{\pi}{r}}{\mu_n}$. R is the characteristic dimension of the body. maximum heat stress in plate, cylinder, and sphere one obtains, respectively, the equations

$$\sigma_y = \sigma_z = \frac{\beta E}{1 - \nu} \theta_0 \sum_{n=1}^{\infty} A_n \left(\frac{\sin \mu_n}{\mu_n} - \cos \mu_n \right) \exp(-\mu_n^* F_0), \tag{3}$$

$$\sigma_0 = \frac{\beta E}{1 - \nu} \theta_0 \sum_{n=1}^{\infty} A_n \left[\frac{2J_1(\mu_n)}{\mu_n} - J_0(\mu_n) \right] \exp(-\mu_n^2 \text{Fo}) , \qquad (4)$$

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Temperature stresses and ...

and

$$\sigma_{\eta} = \frac{\beta E}{1 - \nu} \, \theta_0 \sum_{n=1}^{\infty} A_n \left[\frac{3}{\mu_n^2} \left(\frac{\sin \mu_n}{\mu_n} - \cos \mu_n \right) - \frac{\sin \mu_n}{\mu_n} \right] \exp \left(-\mu_n^2 \text{Fo} \right), \quad (5)$$

Here, β is the coefficient of linear expansion, E the modulus of elasticity, and γ the Poisson's ratio. By comparing these three equations with $\sigma = k \angle t$, the maximum temperature difference can be determined. The expressions standing behind $\frac{\beta E}{1-\gamma}$ in the Eqs. (3) - (5) characterize the difference of temperature between the mean temperature t of the body and the temperature t_0 of the cooling surface. The mathematical condition for the determination of the coordinate of the mean temperature in the state of regular cooling for plate, cylinder, and sphere is given by the following equations:

$$\frac{\sin \mu_1}{\mu_1} - \cos \mu_1 \frac{x^*}{R} = 0, \tag{6}$$

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Temperature stresses and ...

$$\frac{2J_1(\mu_1)}{\mu_1} - J_0\left(\mu_1 \frac{r^*}{R}\right) = 0, \qquad (7)$$

$$\frac{3}{\mu_1^2} \left(\frac{\sin \mu_1}{\mu_1} - \cos \mu_1 \right) - \frac{R}{r^*} \frac{\sin \mu_1 \frac{r^*}{R}}{\mu_1} = 0. \tag{8}$$

The corresponding maximum difference of temperature is given by

$$\Delta \theta_{\text{max}} = \sum_{n=1}^{\infty} A_n \Phi_n \exp(-\mu_n^* \text{Fo}_{\text{max}}). \tag{10}$$

Here, Φ_n is obtained from Eqs. (6) - (8). It turns out that the generalized time Fo_{max} of the appearance of the maximum value of ΔG_{max} in the most general case depends on the Biot criterion and on the configuration of the body. The process of the cooling of the body

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Temperature stresses and ...

practically ends long before the stationary conditions set in. In this case, the change in time of the relative excess temperature of an arbitrary point of the body is given by the exponential law: $\theta = A_1 U_1 \exp(-m\tau)$. In this formula, m is the rate of cooling of the body which can be determined according to the formula m = i.Bi Y Fo, m = m M, where i is the number of the finite dimensions of the body, Y the parametric criterion characterizing the inhomogeneity of the temperature field, Fo, the Fourier criterion for $\tau = 1$ hour, M = m/m the criterion = $\mu_{1\infty}^2$ Fo₁. The cooling time is determined by for the cooling rate, and mo $\ln A_1 + \ln V_1 - \ln \theta$ Here, θ is the relative excess temperature at any characteristic point of the body at the end of the cooling period. The relations obtained were experimentally checked with the aid of a model of a cylinder of a turbine. Theory and experiment are found to be in good agreement. There are 2 figures, 1 table, and 3 Soviet-bloc references.

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Temperature stresses and ...

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ASSOCIATION:

Politekhnicheskiy institut im. V. I. Lenina, g. Khar'kov (Polytechnic Institute imeni V. I. Lenin, Khar'kov)

SUBMITTED:

May 20, 1960

Card 6/6

SHEVELEV, A.A., inzh.

Determination of the optimum speed of the heating of certain bodies. Izv. vys. ucheb. zav.; energ. 4 no.11:77-83 N *61. (MIRA 14:12)

1. Khar'kovskiy politekhnicheskiy institut imeni V.I.Lenina. Predstavlena kafedroy obshchey teplotekhniki.

(Heat--Transmission)

5/124/62/000/008/026/030 1054/1254

· AUTHOR:

Shevelev, A.A.

TITLE:

Temperature induced stresses in plates at non-symmetrical heating

FERIODICAL:

Referativnyy zhurnal, Mekhanika, Svodnyy tom. no. 8V, 1962, 16, abstract 8V 114 (Tr. Kharkovsk. politekhn. in-ta, v. 36, 1961,

145-150)

TEXT: The distribution of temperature-induced stresses are considered in a non-symmetrically heated plate. The ambient temperature on one side of the plate changes at the starting moment suddenly to a constant value, and on the other side of the plate the temperature changes with time according to a given law. The heat transfer from the plate surfaces to the ambient follows the laws of convection. Cases are considered when the ambient temperature changes linearly and exponentially with time.

Abstracter's note: Complete translation.

Card 1/1

SHEVELEV, A. A. (Kharkov polytechnical institute)

"The problem of non-stationary thermal capacity in two-layered plate under marginal conditions of a third type."

Report presented at the Section on Thermal-physical Properties and Non-stationary Thermal Capacity, Scientific Session, Council of Acad. Sci. Ukr SSR on High Temperature Physics, Kiev, 2-14 Apr 1963.

Reported in Teplofizika Vysokikh temperatur, No. 2, Sep-Oct 1963, p. 321, JPRS 24,651. 19 May 1964.

AUTHOR: Shevelev, A. A. TITLE: Temperature stresses in a plate and choice of optimal heating rate B SURCE: Inzhenerno-fizicheskiy zhurnal, v. 8, no. 1, 1965, 79-81 TOFIT TASS: thermal stress, heating rate, temperature stress, Biot number, amber. Predvoditelev number LIPATT: The temperature stresses in an infinite plate were investigated for the time temperature of the medium varies exponentially with the time (condition of the third kind). A connection is established between the maximum temperature is and the Biot (Bi) and Predvoditelev (Pd) numbers. The results show the first maximum tension stresses occur on one surface and the maximum contributes on the other. In the case of heating the signs of the stresses in the stress increases, and then these numbers become infinite, the intrivence of the stress is determined the stress is determined the stress between the initial temperature of the body and the maximum temperature of the body and the maxim	11116-65 EVT(m)/EWF(w)/F ACCESSION NR: AP5005767	8/0170/65/008/001/0079/0081
SARCE: Inzhenerno-fizicheskiy zhurnal, v. 8, no. 1, 1965, 79-81 TOFIT TAGS: thermal stress, heating rate, temperature stress, Biot number, Lamber, Fredvoditelev number PARATE: The temperature stresses in an infinite plate were investigated for the time temperature of the medium varies exponentially with the time (condition of the third kind). A connection is established between the maximum temperature of the maximum temperature of the maximum temperature of the maximum tension stresses occur on one surface and the maximum ten	AUTHOR: Shevelev, A. A.	/6
TOFIT TAGS: thermal stress, heating rate, temperature stress, Biot number, amber. Predvoditelev number Divator: The temperature stresses in an infinite plate were investigated for the temperature of the medium varies exponentially with the time (condition of the third kind). A connection is established between the maximum temperature and the Biot (Bi) and Predvoditelev (Pd) numbers. The results show the time maximum tension stresses occur on one surface and the maximum distributes on the other. In the case of heating the signs of the stresses of the surface and the maximum tension stresses occur on the signs of the stresses of the stress is determined the stress is determined the	TIPLE: Temperature stresse	
Predvoditelev number Predvoditelev number Predvoditelev number Predvoditelev number Predvoditelev number in an infinite plate were investigated for the time temperature of the medium varies exponentially with the time (condition of the third kind). A connection is established between the maximum temperature and the Blot (Bi) and Predvoditelev (Pd) numbers. The results show the time maximum tension stresses occur on one surface and the maximum tensions stresses occur on one surface and the maximum tensions of the stresses occur on the signs of the stresses of the signs of the stresses occur on the stress is determined the stress is determined the	SURCE: Inzhenerno-fiziche	eskiy zhurnal, v. 8, no. 1, 1965, 79-81
the temperature of the medium varies exponentially with the time (condition of the third kind). A connection is established between the maximum temperature of the Biot (Bi) and Predvoditelev (Pd) numbers. The results show the maximum tension stresses occur on one surface and the maximum tension stresses occur on one surface and the maximum tensions of the stresses of the signs of the stresses of the signs of the stresses of the stresses of the stresses of the stress of the stresses of the stress is determined the stress is determined the		
Card 1/2	the temperature o	of the medium varies exponentially with the time (condi-

L 41776-65 AP5005767 ACCESSION NR: of the medium. The dependence of the Fourier number (Fo) on the Biot and Predvoditelev numbers is also determined and it is shown that for heating with maximum intensity (Bi infinite) at a constant temperature, the maximum stress does not set in immediately but depends on Pd. A numerical example is given. The relations wrive can be used to determine the optimum heating rate or to estimate the maximum stress. Orig. art. has: 1 figure and 4 formulas. ACCOCLATION: Politekhnicheskiy institut im. V. I. Lenina, Khar'kov (Polytecinic Institute) SUB CODE: ME, TD ENCL: SUBMITTED: 07Apr64 001 OTHER: 001 NR REF BOV: and Card 2/2

SHEVELEV, A.A.

Thermal stresses in a plate and selection of optimum heating conditions. Inzh.-fiz. zhur. 8 no.1:79-81 Ja '65.

(MIRA 18:3)

1. Politekhnicheskiy institut imeni Lenina, Khar'kov.

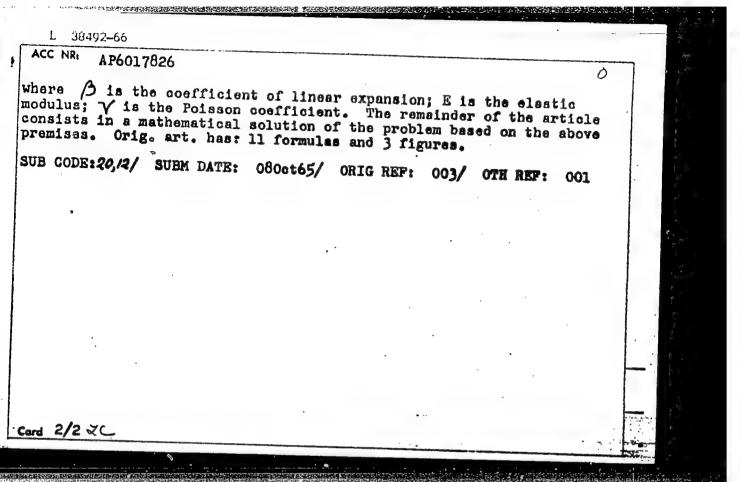
SHEVELEV, A.A. (Khar'kov)

Thermal stresses in a plate and cylinder heated under variable medium temperature donditions. Prikl. mekh. 1 no.11:119-126 '65.

(MIRA 19:1)

1. Khar'kovskiy politekhnicheskiy institut. Submitted Oct. 10, 1964.

WW/EM EWT(d)/EWT(1)/EWT(m)/EWP(w)/EWP(v)/EWP(k)IJP(c) SOURCE CODE: UR/0147/66/000/002/0044/0048 AP6017826 ACC NRI 48 B Shevelev, A. A. AUTHOR: none ORG: Temperature stresses in a cylinder and choice of optimum heating TITLE: conditions Aviatsionnaya tekhnika, no. 2, 1966, 44-48 SOURCE: IVUZ. TOPIC TAGS: temperature stress, Poisson coefficient, elastic modulus, thermal expansion, heating The temperature stresses in a cylinder of radius R are ABSTRACT: determined by the expressions $\sigma_r = \frac{\beta E}{1-\gamma} \left[\frac{1}{R^2} \int_0^R t(r,\tau) r dr - \frac{1}{r^2} \int_0^r t(r,\tau) r dr \right],$ $\sigma_{\theta} = \frac{\beta E}{1-\nu} \left[\frac{1}{R^2} \int_{0}^{R} t(r, \tau) r dr + \frac{1}{r^2} \int_{0}^{r} t(r, \tau) r dr - t(r, \tau) \right],$ (2) $\sigma_{z} = \frac{\beta E}{1 - v} \left[\frac{2}{R^{3}} \int_{0}^{R} t(r, \tau) r dr - t(r, \tau) \right],$ (3) 539.3 UDC: Card 1/2



"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549220002-6

L 01294-67 EWT(1) ACC NR: AP6015031 (A)

SOURCE CODE: UR/0144/66/000/004/0420/0429

AUTHOR: Yakovenko, V. A.; Shevelev, A. A.

33 @

ORG: none

TITLE: Investigation of the magnetic flux in the steel of d-c machines at pulsating supply voltage

SOURCE: IVUZ. Elektromekhanika, no. 4, 1966, 420-429

TOPIC TAGS: electric machine, dec machine, magnetic circuit, electric

ABSTRACT: A theoretical and experimental investigation is reported of B, H, m, and losses in solid and laminated steel structures whose windings are supplied with a pulsating-voltage energy. The problem was investigated by R. O. Carter et al. (Proc. IEE, v. 95, no. 56, p. 11, 1950); however, the present article adapts the results to pulsating-voltage-fed motors. The B/H curve is analyzed, and formulas for losses are developed. Experimental results obtained with toroidal cores ID = 160 mm, OD = 220 mm, 30-mm thick are presented; five cores were tested: solid, 5-mm laminations, 2-mm laminations, 0.8-mm laminations, and 0.75-mm

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UDC: 621.318.3+621.3.022

L 01294-67

ACC NR: AP6015031

laminations. Plots of loss vs. ripple factor, loss vs. degree of lamination, and ∞ vs. ripple factor (∞ is the phase angle between the current and magnetic flux) are shown. Findings: (1) In d-c pulsating-voltage-supplied motors, additional steel loss increases with the ripple factor; however, the solid portions of the magnetic circuit reduce the above effect; (2) The losses caused by the higher harmonics of the pulsating flux must be taken into account; (3) The lag angle of the flux a-c component pulsating flux must be taken into account; (3) The lag angle of the flux a-c component under sustained conditions, and of the total flux, under transient conditions, largely under sustained conditions, and of the total flux, under transient conditions, largely depends on the degree of lamination; a completely laminated magnetic circuit is recommended for d-c pulsating-voltage-supplied motors. Orig. art. has: 7 figures and 32 formulas.

SUB CODE: 09 / SUBM DATE: 19Jul65 / ORIG REF: 006 / OTH REF: 001

Card 2/2 2C

Shrvhlev, A. B.

37552. Meditsinskaya Geografiya Kak Netod Izucheniya Sanitarnogo Sostoyaniya
Naseleniya. V SB: Xll Vessoyuz. Gigiyenistov, Epidemiologov, Mikrobiologov, I Infektsionistov. T. I. M., 1949 s. 355-56.

SO: Letopis' Zhurnal'nykh Statey, Vol. 37, 149

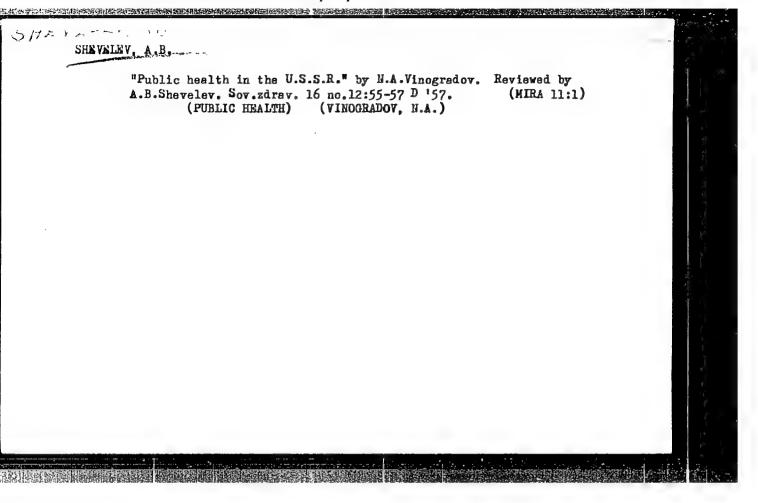
ASHURKOV, Ye.D.; SHEVELEV, A.B.

Responsibility of scientists in public health organization.
Sov. zdrav. 16 no.2:3-8 F '57 (MIRA 10:4)

1. Iz Instituta organizatsii zdravookhraneniya i istorii meditsiny imeni N.A. Semashko Ministerstva zdravookhraneniya SSSR.

(PUBLIC HEALTH

in Russia)



SHEVELEY, A.B.; YERSHOV, V.S.; MAYSTRAKH, K.V., red.; SENCHILO, K.K., tekhn.red.

[Safeguarding the health of the Soviet population] Okhrane zdorov'is naseleniis v SSSR. Moskva, Medgiz, 1959. 36 p.

(PUBLIC HEALTH)

ASHURKÓV, Ye.D., kand.ded.nauk; SHEVELEV, A.B., kand.med.nauk

V.I.Lenin and the development of socialist theory of public health.

Vest.AHN SSSR 15 no.4:11-17 '60.

1. Institut organizatsii zdravookhraneniya i istorii meditany imeni

N.A.Semashko.

(PUBLIC HEALTH)

ASHURKOV, Ye.D.; SHEVELEV, A.B.; DANYUSHEVSKIY, S.M. (Moskva)

Coordination of scientific research relating to public health in socialist countries. Sov. zdrav. 19 no. 8:6-13 160.

(MIRA 13:10)

1. Iz Instituta organizatsii zdravookhraneniya i sitorii meditsiny imeni N.A. Semashko Ministerstva zdravookhraneniya SSSR.

(PUBLIC HEALTH RESEARCH)

SHEVELEV, A.B. (Moskva)

Basic methodological problems in public health research. Sov. zdrav. 20 no.10:33-41 '61. (MIRA 14:9)

1. Iz Instituta organizetsii zdravookhraneniya i istorii meditsiny imeni N.A.Semashko.

(PUBLIC HEALTH RESEARCH)

DUDAREV, K.N.; SHEVELEV, A.G.

Work of meat, milk, and food control stations in Vilnius.

Veterinariia 39 no.8:55-57 Ag '62. (MIRA 17:12)

SHEVELEV, A. G.

"Concerning some General Features of Invariance
Theory and Statistical Theory."

paper presented at the First International Congress of the International
Federation On Automatic Control (IFAC(, Moscow, 27 June - July 1960.

16,8000 (1031,1132,1103)

31325 S/569/61/001/000/010/019 D274/D305

AUTHOR:

Shevelev, A. G. (USSR)

TITLE:

On some common features of invariance theory and statistical theory (As a supplement to the reports

by V. S. Kulebakin and B. N. Petrov)

SOURCE:

International Federation of Antomatic Control. 1st Congress, Moscow, 1960. Teoriya nepreryvnykh sistem. Spetsial'nyye matematicheskiye problemy. Moscow,

Izd-vo AN SSSR, 1961. Trudy, v. 1, 276-281

TEXT: It can be shown that invariance theory and statistical theory lead to the same result when considered as methods for synthesizing control systems. The system

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On some common features ...

 $p_{22}p_{33} - n_{23}n_{32} = 0 \quad , \tag{3}$

then x is not affected by the external disturbance. It can be shown that, if Eq. (3) holds, the controller has infinite gain for all frequencies:

$$\mathbf{W}_{\text{cont}}(s) = \frac{\frac{\mathbf{n}_{32}}{\mathbf{p}_{22}\mathbf{p}_{33}}}{1 - \frac{\mathbf{n}_{32}}{\mathbf{p}_{22}\mathbf{p}_{33}}} = \frac{\mathbf{n}_{32}}{\mathbf{p}_{22}\mathbf{p}_{33} - \mathbf{n}_{23}\mathbf{n}_{32}}$$
(4)

for

$$p_{22}p_{33} - n_{23}n_{32} = 0$$
 $w_{cont}(s) = \infty$ (5)

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On some common features...

where $s= \infty + j/\omega$ is a complex quantity and W(s) is the transfer function which satisfies the mean-square error. For the transfer function of the controller, one obtains

$$W_{cont}(s) = U(s)B(s) = \frac{W(s)B(s)}{1 - W(s)B(s)C(s)} = \infty . \qquad (12)$$

Eqs. (12) and (5) coincide. It is noted that in practice it is difficult to realize the transfer function expressed by Eqs. (5) and (12). Academician V. S. Kulebakin obtained the conditions of realizability in the case of combined control systems. He and Professor Ivakhnenko formulated 4 invariance conditions for such systems. As the second condition is of peculiar interest, it is briefly considered below. By transforming Eq. (1), one obtains for x the expression

$$X = \frac{n_{13} \int p_{22} p_{33} + K(s) n_{32} \int}{p_{11} p_{22} p_{33} + n_{12} n_{21} n_{32}} F(s) \qquad (14)$$

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On some common features...

Hence, it follows that by appropriate choice of the operator K(s) the plant parameter can be made independent of the disturbance F(s). The operator K is given by



$$K(s) = -\frac{p_{22}p_{33}}{n_{32}} = -\frac{1}{W_{cont}(s)}$$
 (15)

and can be realized in practice. Further, this operator is derived by statistical methods from the minimum condition of the mean-square error due to the disturbance, assuming the disturbances to be probability functions. The dispersion is

$$\delta(t) = \lim_{T \to \infty} \frac{1}{2T} \int_{-T}^{T} \left[\varphi(t) - x_0 - (x_2 - x_1) \right]^2 dt , \qquad (18)$$

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On some common features...

sion that the transfer function of a system, obtained by invariance theory, is optimal by the mean-square error criterion. There are 5 figures.

Card 8/8

SHEVELEY, A.G.

S/102/61/000/002/001/005 D251/D302

16.8000

Shevrelyev, A.G. (Kyyiv)

TITLE:

AUTHOR:

On the equivalence of the transfer function of automatic control systems and the optimum transfer function obtained from the condition of the minimum mean square error for a certain class of automatic control systems

PERIODICAL: Avtomatyka, no. 2, 1961, 3 - 8

TEXT: The author considers stabilization systems with stationary action given by the statistical methods described by Viner, Zade-Ragazzini, Buton, Solodovnikov, Matvyeyev, etc. Using the compensation theory, described by G.V. Shchypanov, V.S. Kulebakin, et al., tion theory shows that the synthesis of the transfer function of the author shows that the synthesis of the transfer function of such a system by means of the invariance principle, and on the basis of the minimum mean square error will lead to the same result. Sis of the minimum mean square error will lead to the same result. Hence, it is concluded that the transfer function of an automatic control system under conditions of invariance is an optimum func-

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SHEVELEY, A.G.

S/102/61/000/006/004/004 D299/D305

/3,9000 AUTHOR:

Shevelyev, A. H. (Kyyiv)

TITLE:

Invariance theory and minimum mean-square error for

combined control systems

PERIODICAL: Avtomatyka, no. 6, 1961, 70-74

TEXT: The invariance conditions for combined (tandem) control systems were formulated by Academician V. S. Kulebakin and by Professor O. H. Ivakhnenko. The system under consideration is represented in Fig. 1. The solution of the system equations is

 $x(s) = \frac{[a_{11}] \delta_1 + [a_{21}] \delta_2}{[a]} \cdot F(s)$ (2)

where $\begin{bmatrix} a_{ij} \end{bmatrix}$ is the algebraic complement of the principal determinant of the system of equations. By the second invariance condition Card 1/62

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Invariance theory and ...

Analyzing Eqs. (2) and (4), the conclusion is reached that the more accurate equality (5) is fulfilled, the less the system responds to the disturbance F(s), and the less the control error. It can be shown that thereby the system will be optimal with respect to the minimum mean-square error under statistical stationary disturbances. Denoting

$$\frac{a_{32}}{a_{22}a_{33}} = A(s), \quad \frac{a_{13}}{a_{11}} = B(s), \quad a_{21} = 1$$
 (6)

it is possible to simplify the configuration represented in Fig. 1. After computations, one obtains an expression for the dispersion $\sigma(t)$, involving a functional. Thereupon, the minimum of the functional is obtained by variation of the sought function $\sigma(t)$. The minimum condition for the dispersion is

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Invariance theory and ...

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this equation is solved by means of the complex variable $s=\theta+j\omega$. Its solution yields

$$D(s) = -\frac{1}{A(s)} \tag{21}$$

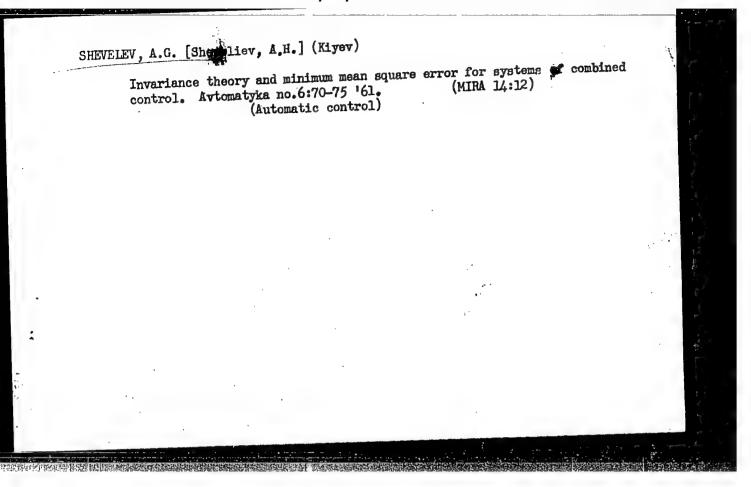
where A(s) is the transfer function of the controller. The conclusions are that stabilization of combined control systems under invariance conditions with respect to statistical stationary disturbances is optimal by the mean-square error criterion. System synthesis should be based on invariance theory, as its mathematical apparatus is simpler than that of the statistical theory. There are 3 figures and 4 Soviet-bloc references.

SUBMITTED: September 10, 1960

Card 5/8_

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549220002-6



SHEVELEV, Anatoliy Grigor'yevich, starshiy prepodavatel'

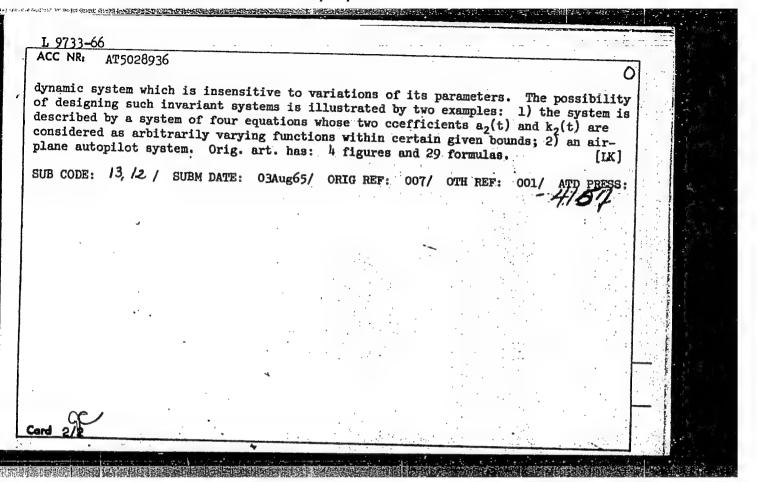
Invariancy principle for multidimensional automatic control systems. Izv. vys. ucheb. zav.; elektromekh. 5 no.6:622-631 '62. (MIRA 15:10)

1. Kiyevskiy institut'@razhdanskogo vozdushnogo flota. (Automatic control)

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549220002-6

L 9733-66 EWT(d) /EWP(v) /EWP(k) /EWP(h) /EWP(1) LJP(c) OS SOURCE CODE: UR/0000/65/000/000/0098/0112	
ACC NR: AT5028936 44,55 AUTHOR: Kukhtenko, A. I.; Shevelev, A. G. Bt	· ·
ACC NR: AT5020930 44, 55 AUTHOR: Kukhtenko, A. I.; Shevelev, A. G. B+	
ORG: none	
TITLE: On the class of automatic control systems invariant with respect to variation	
of parameters SOURCE: AN UkrSSR. Slozhnyye sistemy upravleniya (Complex control systems). Kiev,	
Naukova dumka, 1965, 98-112	
Naukova dumka, 1965, 90-112 TOPIC TAGS: automatic control, sensitivity theory, invariance theory, self adaptive theory automatic control system, parameter, function	•
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systems in which the dynamic property systems, theoretical studies and design of systems, theoretical studies and design of	
systems are highly complex prostruct systems which have the characteristics of designing	5
adaptive systems and are lied of sensitivity theory and the methods of sensitivity theory and the methods of sensitivity equations and using	
of invariance theory. On the basis of the derived sensitivity equations of invariance theory. On the basis of the derived sensitivity equations of invariance theory. On the basis of the derived sensitivity equations of invariance theory. On the basis of the derived sensitivity equations of invariance theory.	
Card 1/2	



KLYUCHEROVA, V.I., tekhnik-elektrik; SHEVELEV, A.I., tekhnik-elektrik.

Work record for kilns at the Sukhoi Log Cement plant. TSement 22 no.3:29 My-Je '56.

1. Sukholozhskiy tsementnyy zavod.
(Sukhoi Log-Kilns, Rotary)

Shevelev, A.G., pensioner

Shock worker of communist labor. Put i put.khoz. 6 no.2:46 (MIRA 15:2)

1. Redaktor stengazety "Puteyets", g. Pervomayak. (Railroads—Employees)

SHEVELEV, A.G. [Sheveliev, A.H.], kand.istor.nauk

Some problems relating to the growing mumber of machines and workers in the machine-tractor stations of the Ukrainian S.S.R. during the fourth five-year plan. Nauk.zap.Kyiv.inzh.-bud.inst. no.1:100-119 159. (MIRA 15:7)

(Ukraine-Machine-tractor stations)

SOV/113-58-12-2/17

AUTHORS:

Sheveley, A.G., Candidate of Economic Sciences, and Pre-

obrazhenskaya, N.S.

TITLE:

Problems of the Economy of the Automobile Industry (Voprosy

ekonomiki avtomobilinov promyshlennosti)

PERIODICAL:

Avtomobil'naya promyshlennost', 1958, Nr 12, pp 1-5 (USSR)

ABSTRACT:

In the next 7 years, 700 complex automatic lines will be put into operation in the Soviet automobile industry. Since 1940 productivity has increased nearly 3 times (Table 1). In the Moskovskiy avtozavod imeni Likhacheva (Moscow Automobile Plant imeni Likhachev) 0.51 m of conveyers are operating per worker, whereas in the British firm Austin 2.3 m per worker are in use. The prime cost of Soviet motorcar production has been reduced in the last years, but there are still large reserves, as shown in Table 2. The percentage of the various materials in the prime cost of two automobile types is given in Table 4. The ratio between the weight of the truck and its carrying capacity is still behind that of foreign trucks. In Mercedes Benz 321/36 it is 0.62 (Table 5), in the Soviet truck GAZ-51A it is 1.0, but improvements are being made. The use of waste products can be improved

Card 1/2

Problems of the Economy of the Automobile Industry SOV/113-58-12-2/17

considerably, e.g. the use of metal chips by briquetting (Table 6). The expenditure for tools has been reduced in the last years which lowered also the prime cost (Table 7).

There are 7 tables.

ASSOCIATION: NIITAvtoprom

Card 2/2

ZYBAYLO, Aleksey Vasil'yevich; SHEVELEV, A.G., inzh., retsenzent; LEVIN-SON, Ye.M., inzh., red.; HADAYEVA, Z.A., red. izd-va; EL'KIND, V.D., tekhm. red.

[Organizing preliminary activities in the mass manufacture of machinery]
Organizatsiia podgotovki proizvodstva v massovom mashinostroenii. Moskva, Gos. nauchno-tekhm. izd-vo mashinostroit. lit-ry, 1961. 234 p.

(MIRA 14:9)

(Factory management)

HYALKOVSKAYA, Vera Sergeyevna; MANSUROV, A.M., inzh., retsenzent;
SHEVELEV, A.G., inzh., retsenzent; SALYANSKIY, A.A., red.

izd-va; DOBRITSYNA, R.I., tekhn. red.

[Main directions of specialization in forging] Osnovnye napravleniia spetsializatsii kuznechnogo proizvodstva. Moskva,
Mashgiz, 1961. 108 p. (MIRA 15:2)

(Forge shops)

SHEVELEV, A. G. (Veterinary Doctor, Chikmansk Sovkhoz, Chylymak District).

"Treated successfully 107 cases of kerato-conjunctivitis with a tissue biostimulant...

Veterinariya, vol. 39, no. 8, August 1962 pp. 54

DUDAREV, K. N. and SHEVELEV, A. G.

"Work of Meat-and-Dairy and Food Control stations in Vilna [Lithuania]"

Veterinariya, vol. 39, no. 8, August 1962, p. 55

EARTASHEV, L.V.; TILLES, S.A., kand. tekhn. nauk, retsenzenti
[deceased]; SMEVELEV, A.G., 1nzh., retsenzent; KOL'DERTSOV,
M.S., inzh., red.; TIKHANOV, A.Ya., tekhn. red.

[Technical and economic calculations in designing and
manufacturing machinery] Tekhniko-ekonomicheskie raschety
pri proektirovanii i proizvodstve mashin. Moskva, Mashgiz,
1963. 303 p.

(Machinery—Design and construction)

3		. 6 ³⁶ -1, y-1-36
1.	ACCESSION NR: AT5004120 S/0000/64/000/000/0220/0230 59 8+1	
	AUTHOR: Sheveley, A. G.	. 4
٠	TITLE: Stabilization of the coordinates of an airplane under conditions of flight in a turbulent atmosphere	
1	SOURCE: Vsesoyuznoye soveshchaniye po teorii invariantnosti i yeye primeneniyu v	
	-long of prayteriza (The confirmation of automatic control systems); το εγνεεθοπαρίνα, Moscow, Izd-vo Na κα, 175+, 220-230	
	TOPIC TAGS: flight stability, control theory, invariance, invariant system, autopilot, aircraft stabilization, atmospheric turbulence	
	ABSTRACT: The paper applies the theory of invariance to the problem of designing an autopilot system for an airplane, which is capable of compensating for the perturbations brought about by flight in a turbulent atmosphere. Part 1 considers the use of combinatorial control systems as stabilizing mechanisms. The problems stabilizing against vertical air current (Or) and horizontal air current (Ur) separately. Using known equations, invariant control systems are intribat pattern is followed in part 1 where deviational systems	
	Card 1/2	

ACCESSION NR: AT5004120

are considered. Finally, the stability properties of the synthesized systems are investigated. Orig. art. has: 5 figures and 40 formulas.

ASSOCIATION: None

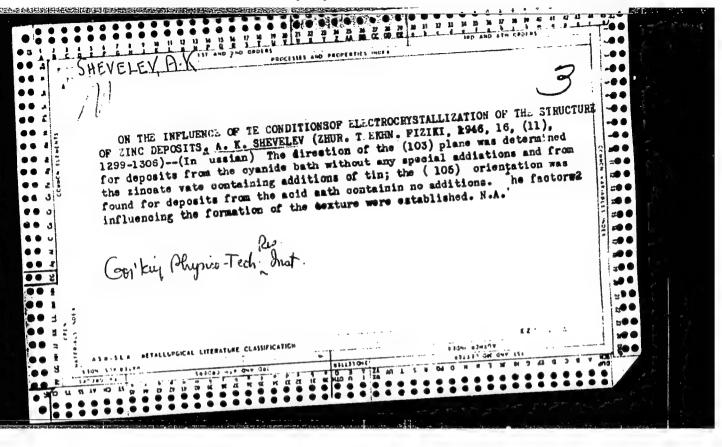
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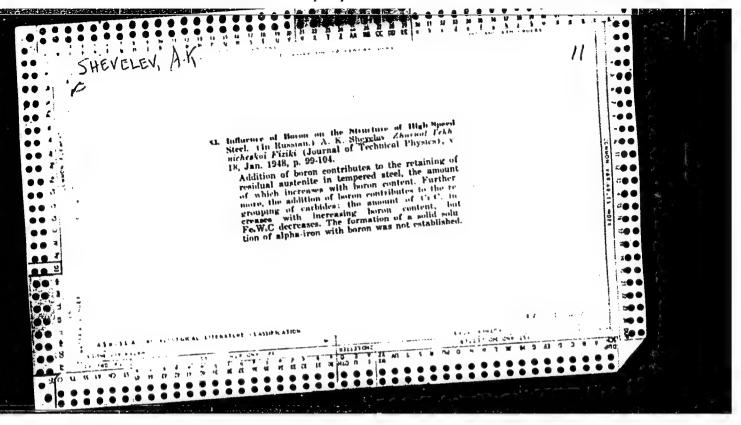
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"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549220002-6

SOV/20-123-3-20/54 18(3) Shevelev, A. K. · AUTHOR: On the Nature of the Solid Solution of Boron in Alpha-Iron (O prirode tverdogo rastvora bora v al'fa-zheleze) TITLE: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 3, pp 453-456 PERIODICAL: (USSR) The author first compares various earlier papers dealing with this subject. In the present paper the period and the density ABSTRACT: of the crystal lattice is determined in an iron alloy containing boron. The chemical composition of this alloy corresponds to the single-phase domain of the solid solution. The 10.10.10 mm samples of the alloy were investigated in an annealed and in a quenched state. The ∞ -iron crystal lattice constant was determined radiographically as a function of the boron content. The relative variation of the lattice constant furnishes very accurate results if this method is applied. Data obtained by measurements and calculations of the &-iron lattice constant as functions of the boron content are given in a table. If boron is dissolved in ∞ -iron, the lattice constant becomes smaller by 0.005 Å per percentage by weight or 0.001 Å per 1 gram-atomic percentage. Card 1/3

On the Nature of the Solid Solution of Boron in Alpha-Iron

SOV/20-123-3-20/54

In the annealed samples the decrease of the lattice constant does not depend on the boron content of the alloy, and consequently the solubility of boron in these samples was equal to or lower than the boron content in the alloy. The boron surplus produces a small quantity of the second phase Fe₂ B,

which is separated mainly on the boundaries of the grain. The solubility of boron in the annealed samples amounted to never more than 0.04%. From radiographical data the density of the alloy for solid penetration-solutions and for solid equivalent (substitution) solutions was calculated. The density of the iron-boron alloy corresponds to that of a solid equivalent (substitution) solution. Geometrical calculations, the decrease of the lattice constant and of the density of the alloy, and the variation of interference line intensity observed on the X-ray pictures show that in the case of dissolution in ∞ -iron, a solid equivalent (substitution) solution is formed. There are 5 tables and 11 references, 5 of which are Soviet.

Card 2/3

On the Nature of the Solid Solution of Boron in Alpha-TAPPROVED FOR RELEASE: 08/23/2000

S0V/20-123-3-20/54 CIA-RDP86-00513R001549220002

ASSOCIATION:

Gor'kovskiy issledovatel'skiy fiziko-tekhnicheskiy institut Gor'kovskogo gosudarstvennogo universiteta im. N. I. Lobachevskogo (Gor'kiy Physico-Technical Research Institute of Gor'kiy State University imeni N. I. Lobachevskiy)

PRESENTED:

June 21, 1958, by N. V. Belov, Academician

SUBMITTED:

June 10, 1958

A Camera for Taking X-ray Diffraction Photographs at Low and High Temperatures (TRK)

There are 2 figures and 3 Soviet references.

ASSOCIATION: Issledovatel'skiy fiziko-tekhnicheskiy institut pri Gor'kovskom gosudarstvennom universitete imeni

N. I. Lobachevskogo (Grandy Physico-technical Research State

University im. N.I. Lobsolevskip)

SUBMITTED:

December 16, 1958

Card 2/2

ACC NR: AP6033048 SOURCE CODE: UR/0126/66/022/002/0210/0214

AUTHOR: Shevelev, A. K.

ORG: None

TITLE: Fine crystalline structure and characteristic temperatures of α -iron alloyed with boron

SOURCE: Fizika i metallov i metallovedeniye, v. 22, no. 2, 1966, 210-214

TOPIC TAGS: crystal structure, fine structures, iron base alloy, boron containing alloy, x ray analysis

ABSTRACT: The author studies the fine crystal structure and characteristic temperature of a-iron alloyed with boron. The alloys studied were melted in an induction furnace. These alloys were subjected after slow cooling to additional annealing at 880°C for 4 hours. The specimens for hardness testing were prepared in microsection form while powder specimens were used for studying block structure and microstresses by x-ray analysis. Cylindrical specimens were used for determining characteristic temperature. Characteristic temperature of the specimens was determined by x-raying them in a special chamber at 295 and 123°K using Mo-radiation. The Vickers unit was used for measuring hardness under a 20 kg force. The results of the study show that the addition of 1 ct% of boron increases hardness of annealed iron by a factor of 2

Card 1/2

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C NR: AP6033048	y a factor of	5. The	strengtl	nening	of a-iron	is exp	lained tion o	by a f a	AT 1
hange in the fine crystal structure in some each other. Strengthening during quench- econd Fe ₂ B phase. These factors reinforce each other. Strengthening during quench- econd Fe ₂ B phase. These factors reinforce each other. Strengthening during quench-									
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sov/6-60-1-3/17

3(4) AUTHORS: Genike, A. A., Shevelev, A. P.

TITLE:

The Tellurometer and the Results of Its Examination by the TsNIIGAik (Central Scientific Research Institute of Geodesy, Aerial Surveying and Cartography)

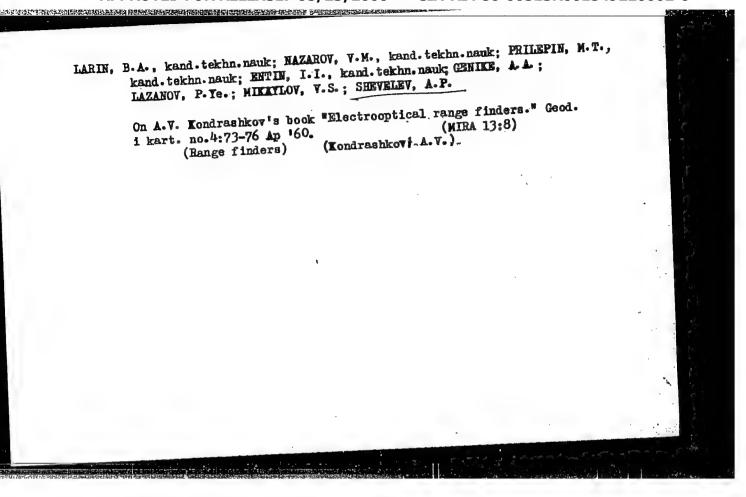
PERIODICAL:

Geodeziya i kartografiya, 1960, Nr 1, pp 17-28 (USSR)

ABSTRACT:

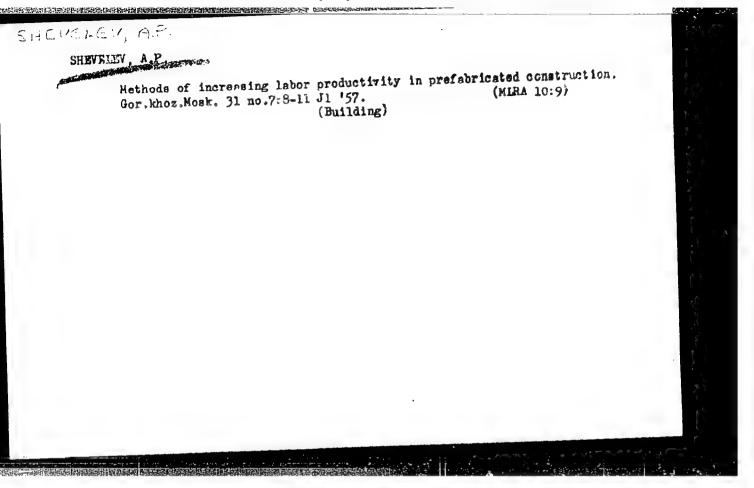
The present paper first describes the mode of operation of the tellurometer developed by T. D. Wodli in the Union of South Africa in 1957. It is a phase radar distance meter measuring the phase difference at the beat frequency. It is pointed out that the principle of such a radar distance meter had already been suggested in 1930 by L. I. Mandel'shtam and N. D. Papaleksi (Ref, Footnote p 19). This radar distance meter was called incoherent phase distance meter. Its circuit diagram is shown and explained by figure 1. Then, the simplified diagram of the tellurometer is shown in figure 2, and the mode of operation, the measuring method, and the evaluation of observation results, are described. In September 1959, the TsNIIGAik (Central Scientific Research Institute of Geodesy, Aerial Surveying and Cartography) acquired a tellurometer and

Card 1/2



"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549220002-6



SHEVELEY, A.P., inzh.

Anslyzing labor expenditures in the construction industry. Biul.

Anslyzing labor expenditures in the construction industry. Biul.

(MIRA 11:7)

stroi. tekh. 15 no. 7:15-19 Jl '58.

1. Nauchno-iesledovatel'skiy institut sel'skogo stroitel'stva.

(Building--Estimates)

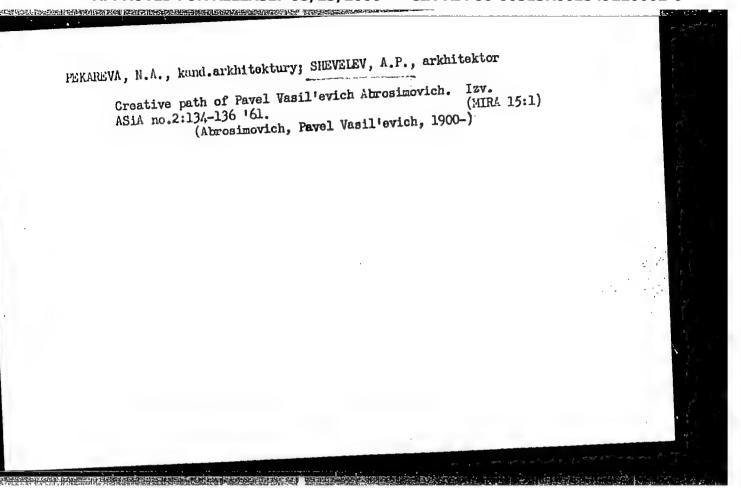
BOGUSHNVICH, Ye.N. (Moscow): SHVVINIV. A.P. (Moscow); BORTNIKOV, V.B. (Kishinev); NEGHATEV, G.A. (Leningrad); KARAKOV, I.I. (Kiyev); (Kishinev); NEGHATEV, G.A. (Leningrad); GAIAKHOV, G.K.; POSTSATEV, E.S. (Moscow).

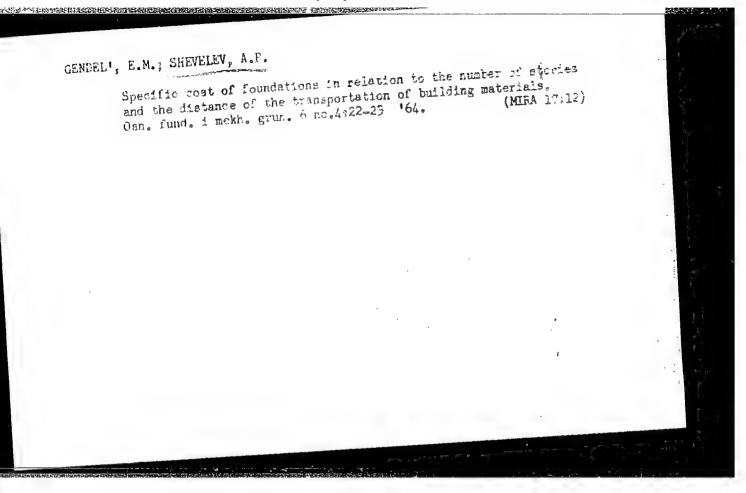
Discussionon methods for determining the coefficient of prefabrication in construction. Stroit. prom. 36 no.6:38-45 Js '58. cation in construction (Precast concrete construction) (MIRA 11:6)

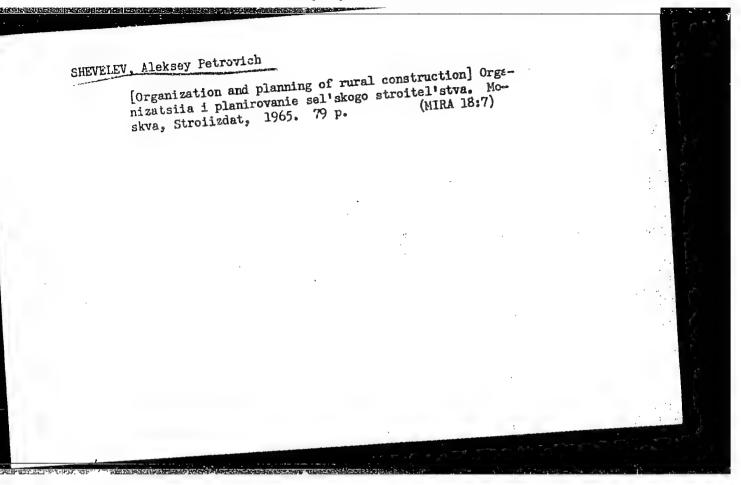
SHEVELEY, Aleksey Petrovich; KUZHETSOV, P.V., red.; TERMILOY, N.G., spetared.; PONOMAREYA, A.A., tekhn.red.

[Precast construction and its economic effectiveness] Sbornoe stroitel'stvo i ego ekonomicheskais effektivnost'. Moskva, Gosplenizdat, 1960. 157 p.

(Precast concrete construction)







"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549220002-6

SHENDERIK, M.R., Cand Tech Sci-(diss) "Someroial method of dehydration of ethylbenzene into styrene, and isopropylbenzene into alpha-methylstyrene in an adiabatic roactor." Mos, 1958. 12 pp with graphs; 1 sheet of graphs (Min of Chemical Industry of the USSR. State Inst of the Manuary), 150 copies (KL, 30-58, 129)

10/

24(8), 25(5) SOV/64-59-3-12/24 Shendrik, M. N., Boreskov, G. K. AUTHORS: Calculation of an Adiabatic Reactor for Endothermic Processes TITLE: (Raschet adiabaticheskogo reaktora dlya endotermicheskikh protsessov) Khimicheskaya promyshlennost', 1959, Nr 3, pp 55-57 (USSR) PERIODICAL: Since a number of endothermic processes recently has been ABSTRACT: carried out in industry by means of adiabatic reactors (for instance producing divinyl of butylene, styrene of ethyl benzene and alcohols of esters), the development of a method for calculating these reactors is of special interest. A graphic method was developed, based upon the general method for the computation of the catalyst volume with which exothermic, reversible reactions take place. It was found that the task lies mainly in the definition of the quantity τ (τ - fictitious contact time) in seconds, according to the equation (1). Isotherms are given for the dehydration of isopropylbenzene which represent the function of the degree of transformation & of t (Fig 1), carried out in the Giprokauchuk. The temperature function t of & for the process mentioned above, computed according to an equation (4), is also represented Card 1/2

Calculation of an Adiabatic Reactor for Endothermic Processes

sov/64-59-3-12/24

graphically (Fig 2). The graphic method of definition is also represented in the same example (dehydration of isopropyl-

benzene) by means of a diagram $\frac{d \, \tau}{d \, \alpha} - \alpha$ (Fig 3). It is pointed out that the change of the catalyst activity has to be considered, and therefore the value computed for τ has to be multiplied by the coefficient 1.15. The dehydration of isopropylbenzene was also examined on a large scale (Ref 4). Conditions and some results are given (Table). There are 3 figures, 1 table, and 4 references, 3 of which are Soviet.

Card 2/2

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Garmonov, I.V., Sinkes soccervo Monomers for 250 St. Erra	Sponsoring A. S. S. Z.	COVERAGE: The Establishment of E.V. Labor	discuss sections to percentifula to percentifula to the committe that or committe that or those	K Ecchan, L.G., Rydrocarbons Ronoralisti Co Solution A Ecchan, L.G., Rydrocarbons Rydrocarbons Rolletton	A Ecchan, Lafe, hydrocarban, mountain Co solution and gorta, Tuth,	Mars the Use Hars younge.	*Mart's yanove, laparities P. *Korotkevich, *Inogradom, ************************************	Spatelov, V.J. Bensene into Morine, I.B., Joint Product	Morian, I.H., Nonetspol'ski Ya.B. Bhains Meoryelon Vi	
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KOROTKEVICH, B.S.; SHENDRIK, M.N.; BOCDANOVA, O.K.; SHCHEGLOVA, A.P.;
VINOGRADOVA, N.P.

Catalytic dehydrogenation of ethylbenzene. Khim.prom. no.4:243-248
Ap '61.

(Benzene) (Dehydrogenation)

5/195/62/003/005/007/007 E202/E492

AUTHORS: Shendrik, M.N., Boreskov, G.K., Goryainova, R.M.,

Slin'ko, M.G.

TITLE: Method of investigating catalysts undergoing rapid

activity changes during the process of reaction

PERIODICAL: Kinetika i kataliz, v.3, no.5, 1962, 797-799

A laboratory scale installation for studying circulation TEXT: of reaction mixture with a continuous flow of catalyst through the reactor is briefly described. The method is used in the dehydrogenation of butane. The circulating system was kept at a constant pressure of 30 mm Hg. The reaction mixture was continuously removed from the reactor and its volume analysed Precipitation of carbon on the catalyst was chromatographically. It was shown that with the reaction gas also determined. circulation of 200 to 270 litres/hour, and the dehydrogenation reaction at 550 to 590°C, the time of residence of the pseudo liquefied catalyst in the reactor for a period of 11 to 20 min; equilibrium was reached within 4 to 6 hours and its stability retained as long as the volume of the catalyst permitted. The Card 1/2

5/195/62/003/005/007/007 E202/E492

Method of investigating ...,

activity of the catalyst expressed as litres (C4H8 + C4H6)/litres of catalyst hour was measured by changing the residence time of catalyst in the reactor. Details of five runs with butane feed ranging from 6.6 to 12.7 litres/hour are given. There are 1 figure and 1 table.

ASSOCIATION: Giprokauchuk Institut kataliza SO AN SSSR

(Giprokauchuk Institute of Catalysis SO AS USSR)

SUBMITTED: June 1, 1962

Card 2/2

SHENDRIK, M.N.; BORESKOV, G.K.; KIRILYUK, L.V.

Variation in the activity of a chromia-alumina catalyst in the process of butane dehydrogenation, Kin. i kat. 6 no.2:313-319 Mr-Ap '65.

(MIRA 18:7)

1. Institut kataliza Sibirskogo otdeleniya AN SSSR.

SHENDRIK, N. [Sendriks, N.]; KHOLMOGOROV, A.

Let us realize in life the decisions of the July Plenum of the Central Committee of the Communist Party of the Soviet Union and the 3d Plenum of the Central Committee of the Latvian Communist Party. Vestis Latv ak no.10:5-18 '60. (EEAI 10:9:10

(Russia—Communist Party) (Latvia—Communist Party)

SHENDRIK, N. [Sendriks, N.]

Social and personal factors in the period of the large-scale building of communism. Vestis latv ak no.3:3-11 161.

VENEVTSEV, Yu.N.; ZHDANOV, G.S.; SHEUDRIK T.N.

X-ray examination of the system PbTiO3-"PbSnO3." Kristallografiia
1 no.6:657-665 '56. (MLRA 10:5)

1.Fiziko-khimichaskiy institut im. L.Ya. Karpova.
(Lead titanates)
(Tin compounds)
(X-ray crystallography)

SHENDRIK, T.N., VENEVISEV, YU.N., ZHDANOV, G.S.

"Investigation by the X-Ray Method of the System PbTiO3: 'PbSnO3,'" by Yu. N. Venevtsev, G. S. Zhdanov, and T. N. Shendrik, Physicochemical Institute imeni L. Ya. Karpov, Kristallografiya, Vol 1, No 6, Nov/Dec 56, pp 657-665

An extensive solid solution area of Pb (Ti, Sn) 03 extending up to 75 mol \$\frac{4}\$ of "PbSnO3" (actually Pb2SnO4 + SnO2) has been found to exist in the system PbTiO3 - "PbSnO3". It was established that the constitutional diagram of the solid solution Pb (Ti, Sn) 03 resembles that of Pb (Ti, Zr) 03, but differs from that of Ba (Ti, Sn) 03. The conclusion is drawn that the mechanism of the spontaneous electrical polarization of the seignetto-electric substance BaTiO3 differs from that of PbTiO3, although the two were regarded as completely analogous up to now. This conclusion is based in part on X-ray crystallographic data which show that while in PbTiO3 crystal cells Pb cations are displaced, Ti cations are displaced in BaTiO3 cells.

Sum. 1287

"APPROVED FOR RELEASE: 08/23/2000 CIA

CIA-RDP86-00513R001549220002-6

UMANSKIY, A.A., kand.med.nauk; SHENDRIK, T.S.

Hypertension in adolescence. Terap. arkh. 29 no.5:79-88 My '58.

(MIRA 11:4)

1. Iz Kirovogradskoy oblastnoy bol'nitsy.
(HYPERTENSION, enidemiology,
in adolescents (Rus)

CHERNENKO, A.R.; SIMFOROV, G.Ye.; SHKUTA, E.I.; TEREKHOV, I.P.;

POLYANSKIY, P.S.; PISANKO, K.S.; SHENDRIK, V.K.; AL'TSHULER,

M.A.; RIVKIN, I.D.; ENGEL', Ya.R.; CHETYRKIN, M.I., red.izd-va;

PYL'NEN'KIY, A.A., red.izd-va; OSVAL'D, E.Ya., red.izd-va;

PROZOROVSKAYA, V.L., tekhn.red.

[Sharp increase in the labor productivity of Krivoy Rog Basin miners; practices in the "Bol'shevik" and "Gigant" mines]
Krutoi pod"em proizvoditel'nosti truda gorniakov Krivbassa;
iz opyta raboty shakht "Bol'shevik" i "Gigant." Moskva, 1960.
173 p. (MIRA 13:11)
(Krivoy Rog Basin—Iron mines and mining—Labor productivity)

TEREKHOV, I. P., gornyy inzh.; SHENDRIK, V. K., gornyy inzh.; POLYANSKIY, F. S., gornyy inzh.

Ore-mining techniques and equipment and the organization of labor in Krivoy Rog Basin mines should be changed. Gor. zhur. no.10:17-21 0 '62. (MIRA 15:10)

1. Nauchno-issledovatel'skiy gornorudnyy institut, Krivoy Rog.

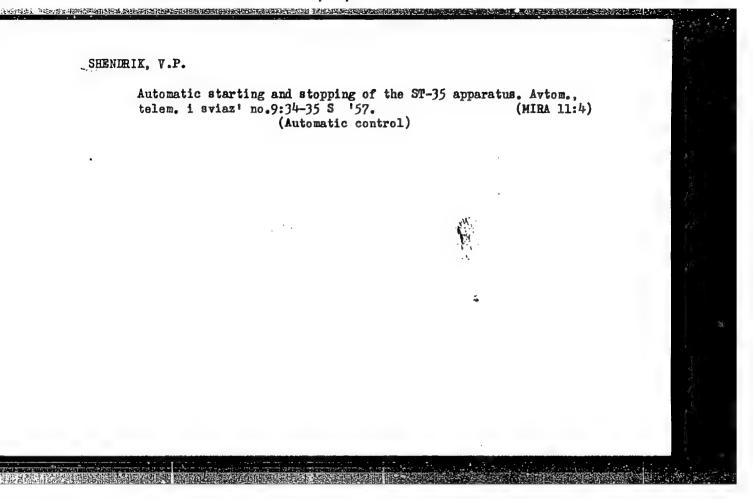
(Krivoy Rog Basin-Iron mines and mining)

PISANKO, K.S., Pand.tekhn.nauk [deceased]; SHENDRIK, V.K., inzh.; POLYANSKIY, F.S., inzh.; PATLAN', N.N., inzh.

A new type of mine. Gor.zhur. no.1:30-35 Ja '65.

(MIRA 18:3)

1. Nauchno-issledovatel'skiy gornorudnyy institut, Krivoy Rog.



SHENDRIK, Yu.G. gvardii leytenant med.sluzhby

Tield work at the unit level for students at the Academy of
Military Medicine. Voon.-med.shur. no.8152-54 Ag 156 (MIRA 12:1)

(MEDICINE, MILITARY.-STUDY AND TEACHING)

38 TUTTINU',).

4597

1. Vologo-Akhtubinskaya Poyma. (3.2Kh. Osvoyeniye). M., Goskul'tprosvetiz@t, 1954. 70 s.; 2 L. Ill. 22 sm. (Vsesoyuz. S.-Kh. Vystavka). 3.500 Ekz. 40 k.- (51-422) P

30: Knizhnaye, Letopis', Vol.1, 1956

DANILOVA, C.V.; LOTTER, M.N.; ALEKSETEV, N.A.; KOVALEV, I.I.; DANILOV, A.Ye.;

SHENDRIKOV. G.L., i.o. glavnogo metodista; ORLOVA, V.P., redaktor;

FAVLOVA, M.M., tekhnicheskiy redaktor

["Water resources management and rural hydroelectric power stations"
pavilion; a guidebook] Pavil'on "Vodnoe khoziaistvo i sel'skie
gidroelektrostantsii"; putevoditel". Moskva, Gos. izd-vo selkhos.
lit-ry, 1956. 21 p. (MIRA 9:12)

1. Moscov. Vsesoyusnaya sel'skokhosyaystvennaya vystavka, 19542. Direktor pavil'ona (for Danilova)

(Moscov--Agricultural exhibitions)

(Mater supply, Rural)

(Mater resources management and rural hydroelectric power stations)

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体的学师有别们是中华先生最小的特色和全体的现在分词的发展的标准。 医瓦雷克氏管

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KOVUN, P.K., NEVZOROV, A.P., ANTONENKO, G.P.,; BUDINA, L.V.; VORONINA, Ye.P.;
GUSEV, P.I.: YELAGIN, M.N., ZHURAVLEV, M.A., ZALOZNYY, K.D.: KOMKOV, V.N.;
KOROBOV, A.S.; KORCHAGIN, V.N.; LAVROV, V.N.; LAPSHINA, O.V.; LUTIKOV, I.Ye.,
MAKEVNIN, A.Ya.; MOROZOVA, P.I.; NEVZOROV, A.P.; PONOMARCHUK, M.K.; PUCH—
KOV, A.M.; RAZMOLOGOVA, A.M.; RUBIN, S.M.; SELEZNEVA, O.V.; SEMENOVA, F.I.;
SPIRIDONOVA, A.I.; SUSHCHEVSKIY, M.G.; USOV, M.P.; TARKOVSKIY, M.I.;
CHENYKAYEVA, Ye.A.; SHENDRIKOV, G.L.; SHUL'GIN, G.T.; TSITSIN, N.V., aka—
demik, redaktor; REVENKOVA; A.I., redaktor; KHOKHRINA, N.M., khudozhestvennyy redaktor; VESKOVA, Ye.I., tekhnicheskiy redaktor; PEVZNERV.B.I.,
tekhnicheskiy redaktor.

[Plant breeding at the 1955 All-Union Agricultureal Exhibition] Rastenie-vodstvo na Vsesoiuznoi sel'skokhoziaistvennoi vystavke 1955 goda. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1956. 687 p. (MLRA 10:4)

(Moscow--Plant breeding--Exhibitions)

SHENDRIKON, G.L.

AUTHOR:

Shendrikov, G.L.

26-10-20/44

TITLE:

Use of the Hydraulic Drill in Orchards and Vineyards (Primeniye gidrobura v plodovodstve i vinogradarstve)

PERIODICAL:

Priroda, 1957, No 10, pp 100-102 (USSR)

ABSTRACT:

The author describes experiments he conducted in the field of irrigation with a hydraulic drill developed by him in cooperation with Professor N.D. Kholin in 1953. The method solves the problem of subsoil irrigation and fertilization of fruit trees, grapes and berry bushes with mineral and organic solutions. The hydraulic drill consists of an ordinary water pipe of 12 - 22 mm in diameter and 0.8 - 1.0 m in length, which is provided with a screwd-on nozzle. The water brought in by the drill developes enough kinetic energy to drill a hole in the ground and to force the liquid under 1.5 - 2.0 atm pressure into the soil. It penetrates through the pores and channels of the earth and surrounds the entire root system of the respective tree or bush, thus creating very favourable conditions for the plant. The system is now widely used on state and collective farms in the USSR. It is also successfully applied to fight the dangerous insect pest phylloxera by forcing appropriate poisonous liquids into the

Card 1/2

Use of the Hydraulic Drill in Orchards and Vineyards

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26-10-20/44

soil. The hydraulic drill is further used for planting young vine plants which need deep holes and well distributed moist-

There is one figure and one photo.

ASSOCIATION: All-Union Agricultural Exposition (Moscow) (Vsesoyuznaya sel'-

skokhozyaystvennaya vystavka (Moskva)

AVAILABLE:

Library of Congress

Card 2/2

AUTHORS:

Kholin, N., Professor, Shendrikov, G., Engineer 50V/29-58-7-6/23

TITLE:

Water May Be Obtained From the Air (Vodu mozhno dobyvat' iz

vozdukha)

PERIODICAL:

Tekhnika molodezhi, 1958, Nr 7, pp. 6-7 (USSR)

ABSTRACT:

Already for some considerable time endeavors have been made to work out a method of irrigation by means of which the water may be conveyed straight to the roots of the plants. The authors of this article once constructed a very simple and handy water-drill for the introduction of loany solutions into the soil. It operates on the principle of underwashing the soil. During a long drought on the Crimea in 1957 an area of more than 15000 acres of vineyards was endangered. The agronomist D.Kovalenko suggested that each vine be alloted 3-4 1 of water. The drill constructed by the authors was used for this purpose. As a result, the plants recovered and the crop was saved. Already in 1944 tests were carried out with this drill. Five liters of water were poured into the soil to a depth of 60 cm. After 12 hours sections were cut out along the axis of the drill hole. It was found on this occasion that the soil contained 4 times the amount of water

Card 1/3

Water May Be Obtained From the Air

307/29-58-7-6/23

introduced. After 48 hours the soil contained even more water. Similar phenomena were observed by scientists already at earlier periods. The prominent agronomist and meliorator A.N.Kostyakov recommended underground condensation irrigation. No exact explanation of all phenomena connected with the condensation of air-vapors in the soil has hitherto been found. The most important work was performed in this field by Professor V.V. Tugarirov, who proved it possible to convert atmospheric vapors into water. The application of hydromechanical methods makes it possible to put the ideas developed by Tugarinov into practice in a considerably more simple and easier manner. The soil inself is used as a condenser. In reality the introduction of water into the soil by means of a drill is necessary only for the purpose of providing channels making it possible for hot air to penetrate into the soil, thus causing a peculiar sort of underground rain. The water-drill is used not only for the purpose of irrigation but also for the purpose of supplying the plants with additional nourishment, a plactice which was formerly considered to be of eminent importance by the famous selector I.V. Micharin. The drill mentioned may also be used with good success for the

Card 2/3

Water May Be Obtained From the Air

SOV/ 29-58-7-6/23

purpose of exterminating the phylloxera, a parasite which attacks the roots of vines. It has also been found useful when planting shoots. The drill is now being used also for other purposes as e.g. the draining of boggy land, the putting up supports for vines, and for the prevention of the filtration and oversalting of the soil. By means of this simple device it will be possible to realize an old dream: to convert the desert areas of Kara-Kum into flourishing gardens. There are 3 figures.

1. Irrigation systems--Design 2. Irrigation systems--Test results

Card 3/3

